



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,330	01/25/2001	Atsushi Kashihara	862.C2095	3931
5514	7590	10/27/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO			QIN, YIXING	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

2622

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/768,330

Applicant(s)

KASHIHARA, ATSUSHI

Examiner

Yixing Qin

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 25 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 25 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites the limitation "represents image" on the fourth line of claim 4. Claim 5 again recites the limitation "represents image" on the fourth line of claim 5. Claim 7 yet again recites the limitation "represents image" on the third line of claim 7. There is insufficient antecedent basis for this limitation in the claims. It seems likely that the claims should have stated "represents *said particular* image." Furthermore, claims 6, 8, and 9 are rejected as well due to the fact that they are dependent on one of the above rejected claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2622

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 7, 8, 9, 10, 16, 17, 19, 20, 21 and 22 are rejected under 35

U.S.C. 102(b) as being clearly anticipated by Fan (U.S. Patent No. 5,533,144)

Regarding claims 1, 19, 20, 21 and 22, the "input step of inputting..." is disclosed by Fan. In column 2, lines 30-37 Fan discloses that the "...image ...is scanned (i.e. inputted) by the scanning part of the copier and that (t)he information of the scanned color image is typically organized into three or four channels."

Further regarding claim 19, 21, and 22, a "driver" or "program" is disclosed by Fan. Fan discloses in Fig. 3 the program for his counterfeit detection invention and in column 2, lines 26-28, that a "...currency detector 1 is placed in parallel to the normal video pass 30...and...that a data processor (CPU) 22 performs the functions of the detector 1."

Further regarding claim 1, 19, 20, 21 and 22, an indication of "high quality" is disclosed by Fan. Fan discloses in column 5, lines 26-29, that there is an "...examining means for ...determining whether said portion contains a predetermined pixel intensity arrangement..." The "pixel intensity arrangement" is an indication of the quality of the image, which is what one would use in the determination of whether an image was of high resolution (quality). In column 3, lines 22-27, Fan explains that the quality is determined by the strength (sharpness) of the edges in the image. When it is

Art Unit: 2622

determined that the edges are strong (sharp) edges in the image, the image is deemed to be of high quality and vice versa.

Further regarding claim 1, 19, 20, 21 and 22, the step of determination of a “particular image” and the performance of “predetermined processing” is disclosed by Fan. Fan discloses in fig. 3 step S8, and column 4, lines 38-44, that “(s)hould currency be discovered from a positive match between the template and the unknown document, the photocopier or printer 28 may be deactivated....and the operation terminated.”

Regarding claim 2, the judgment of whether an image is of “high quality” is disclosed by Fan. Fan discloses in column 4, lines 50-57, that “...the matching is performed hierarchically...from a low resolution to a high resolution (i.e. “high quality”)...(which) is typically about 16 pixels per inch.” As stated above in the last limitation of claim 1 (see Fan, column 2, lines 22-27) the determination of the edge strength is, effectively, a determination of the image resolution because low resolution images will not have sharp edges.

Regarding claim 3, the “predetermined resolution” at one can sufficiently judge an image is disclosed by Fan. Fan discloses in column 4, lines 55-57 that “...fairly reliable results can be obtained at low resolutions. High resolution is merely used for final verification.” Also, see remarks from the claim 2 rejection above.

Regarding claim 4, referring back to the second limitation of claim 1 and the limitations in claim 2, Fan discloses both the ideas of the predetermined resolution and the judgment of whether an image is a particular image.

Regarding claim 7, the idea that if "said image represents image, it is judged that said image data is high quality" is disclosed by Fan. Fan discloses in column 4, lines 50-57, that "...the matching is performed hierarchically...from a low resolution to a high resolution (i.e. "high quality")..." As stated above in the last limitation of claim 1 (see Fan, column 2, lines 22-27) the determination of the edge strength is also a determination of the image resolution because low resolution images will not have sharp edges.

Regarding claim 8, the Fan reference teaches the limitation of using "a data amount equal or greater than a predetermined amount" to judge image quality. Fan teaches in column 2, lines 35-47 the organization of the information of the scanned image. Fan discloses that the two techniques used usually sample images at 8, 16, or 32 dpi. Furthermore, Fan discloses in column 4, lines 53-54 that "...'high resolution' is a relative term. It is typically about 16 pixels per inch..." Thus, sampling images at 16, or 32 dpi (a "predetermined amount of data") would make the image data be of high resolution (high quality). In addition, the determination of high quality is based on the edge strength as discussed in the above rejections.

Art Unit: 2622

Regarding claim 9, the Fan reference teaches the limitation of “predetermined amount of data enabling representation of predetermined number of colors”. Fan teaches in column 2 lines 35-42, that “(t)he information of a scanned color image is typically organized into three or four channels...(such as) RBG or CIELAB...”

Regarding claim 10, Fan discloses the use of a “driver for said image forming apparatus” to perform the various steps mentioned in the claim. Fan discloses a process that runs inside a CPU, which in turn effectively acts as a “driver.” Fan discloses in Fig. 3 the steps of judging an image’s quality (sample image of platen S1), the step of determining whether an image is a particular image (counterfeit detected? S8) and the step of taking some predetermined processing (Deactivate photocopier...S9). Further more in column 2, lines 27-28, that “(a) data processor (CPU) performs the functions of the detector 1.”

Regarding claim 16, Fan discloses an “image processing (step to) degrade image quality...” Fan discloses in column 4, lines 38-43 that if there is match (i.e. inputted image is a particular image), then “...the portion of the platen image containing the unknown document may be deleted from the final printed image...” The deletion of a portion of the image to be printed lowers the quality of the image.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan ( U.S. Patent No. 5,533,144) in view of Wu et al ( U.S. Patent No. 6,317,524)

Regarding claim 5, the Fan et al discloses all of the limitations except for the idea of the image size used in determination. The secondary reference, Wu et al discloses in column 1, lines 30-48, particularly lines 34-37, that currency has features of various sizes. When a feature of a particular size is detected, then the copying process is terminated. Both Fan and Wu et al are trying to prevent the counterfeiting of currency and do so by detecting certain features in the image. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to simply apply Wu et al's size detection technique to Fan's invention. The motivation is to increase the detection of currency and to help reduce the possibility of copying of counterfeit currency.

Regarding claim 6, the Fan reference discloses, along with the Wu et al reference, all of the limitations in claim 5, with the Wu et al reference further disclosing the limitation of size in the determination of whether an image is high quality. Wu et al



Art Unit: 2622

discloses in column 1, lines 34-37, that the "...copying (of an image) (is) discontinued if a currency mark of a particular size is found by the currency detection circuit in the printer." Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use size as a way to look for a match with a particular image. The motivation is to see if the inputted image might be sensitive material.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan ( U.S. Patent No. 5,533,144) and in view of Claiborne (U.S. Patent No. 6,765,688)

Regarding claim 11, the Fan reference discloses all of the limitations except for the idea of a print command being inputted from a program as part of the input step. The secondary reference, Claiborne discloses in column 7, lines 48-50, that "(t)he print command can either be accessed from the application software 11, or it can be accessed directly through the printer driver program." Both the Fan and the Claiborne references relate to marks (such watermarks) and printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize Claiborne's print command and software with Huang et al's invention. The motivation is to provide the user with on demand printing.

Regarding claim 12, Fan reference discloses all of the limitations except for the format to be in page description language. The secondary reference, Claiborne

Art Unit: 2622

discloses in column 10, lines 34-35, that usually files to be printed are in a format "...known as a page description language, or 'PDL' ." Both the Huang et al and the Claiborne references relate to marks (such watermarks) and printing. Although Claiborne does not necessarily say that the print command is in PDL, it is understood from the reference that PDL is a common language that is compatible with printers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize Claiborne's disclosure of PDL with Huang et al's invention. The motivation is to provide a format that is compatible with printers.

Claims 13, 14, 15 and 18 are rejected under 35 U.S.C. 103(a) as being *Fan* (U.S. Patent No. 5,533,144) and in view of *Rhoads* (U.S. Patent No. 6,285,776).

Regarding claim 13, *Fan* reference discloses all the limitations except for the judgment of whether an image is a particular image due to particular information (though *Fan* does determine the presence of certain data that would be expected to be found in a high quality image of currency). The secondary reference, *Rhoads* discloses in column 7, lines 20-22, that "(i)f watermark data associated with a banknote is detected, the photocopier can take one or more steps." Both the *Fan* and the *Rhoads* references are trying to prevent the counterfeiting of bank notes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize *Rhoads*'s watermark ("particular image") and watermark detection along with *Fan*'s invention to detect whether particular information (such as the watermark) determines a

particular image (such as a bank note). The motivation is to be able to better determine if that there is a match for certain criteria between the inputted and prestored images (i.e. if currency is being copied).

Regarding claim 14, the Fan and Rhoads reference disclose all of the limitations in claim 13 with the secondary reference, Rhoads disclosing in column 10, lines 16-17, that “(w)atermarking can be applied to digital content...” Both the Fan and the Rhoads references are trying to prevent the counterfeiting of bank notes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize an digital (“electronic”) watermark as disclosed by Rhoads to be embedded into an image. The motivation is to be able to tell if that there is a match for certain criteria between the inputted and prestored images.

Regarding claim 15, the Fan reference discloses all of the limitations except for the warning message display. The secondary reference, Rhoads discloses in column 7, lines 23-25, that if a bank note or the like is detected, then “...display a message reminding the operator that it is illegal to reproduce currency.” Both the Fan and the Rhoads references are trying to prevent the counterfeiting of bank notes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize Rhoad’s message display along with Huang et al’s invention to warn users. The motivation is to prevent counterfeiting.

Regarding claim 18, the Fan reference discloses all the limitations except for the storage of the operation history. The secondary reference, Rhoads discloses in column 16, lines 27-31, that an "...embedded UID facilitates identifying the machine that generated a counterfeit banknote..." Rhoads disclose in column 111, lines 59-62, that the UID is "...used as an index into a database where the name of the copyright owner...and associated information." Both the Fan and the Rhoads references are trying to prevent the counterfeiting of bank notes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize Rhoad's UID technique along with Fan's invention to keep a history of who printed what. The motivation is to be able to track what machines/owners have printed illegal images.

Claim 17 is rejected under 35 U.S.C. 103(a) as being Fan (U.S. Patent No. 5,533,144) and in view of Suzuki et al (U.S. Patent No. 5,216,724).

Regarding claim 17, the Fan reference discloses a form of degradation (deleting a portion of the image) but fails to explicitly disclose any processing related to filling the image with color. The secondary reference Suzuki et al discloses in column 10, lines 11-17 that "...if the step 1009 detects the red stamp mark, indicating the possibility of forgery...(a signal) is sent to the printer unit, thus depositing black toner all over the entire surface and disabling proper copying." Both the Fan and Suzuki et al references are relating to the prevention of counterfeiting currency. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to apply Suzuki et al's black toner depositing technique to Fan's invention. The motivation would be to make printed counterfeit currency useless due to the degrading of the printed image.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is 703-306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YQ

  
JOSEPH H. MANCUSI  
PRIMARY EXAMINER